

Notes on the Fisheries and Bureau Work in Southeastern  
Alaska in 1922.



It was apparent at the opening of the fishing season of 1922 that in Southeastern Alaska there would be an increase of activities in the salmon industry over 1921 as several canneries then idle would resume packing and a few new plants would be opened. Yet this expansion of operations could not reasonably have been based upon an anticipated improvement in the runs of salmon as the probability of such a development was not seriously entertained by those who knew conditions. It was attributed, however, to better market conditions, resulting from the absorption in trade of surplus stocks of canned salmon which accumulated during the recent years of heavy production. In some measure it was doubtless affected by the theory that it is good business to operate a cannery just as long as no losses are incurred. From a financial viewpoint this may be good logic, and every one will concede that local business in general is helped by the greater number of canneries operating as any enlargement in the fishery industry is reflected in a corresponding improvement in other lines of activity. But this practice is unsound, and harmful in the long run to the varied industries of any locality if it is put into operation regardless of the effect it may have upon the permanent supply of salmon, which is the mainstay of nearly all business in Alaska. A short-sighted policy like this, if persistently adhered to, means incalculable harm to the salmon fisheries.

On the other hand, salmon canning is not a benevolent undertaking but it is a business enterprise whose end and aim is money making and in the pursuit of which the public good becomes a secondary consideration if it is not entirely disregarded. Such was the situation in Southeastern Alaska in 1922 when almost twice as many canneries were operated as in 1921 and at a time when the salmon runs should have been saved from the heavy and unwise demands that were made upon them. It is a recognized fact that these runs have been seriously overfished in recent years and that the packers of the district now view with no little concern the preparations of a season, knowing not when a ruinous collapse of the industry may come.

In the region north of and including Frederick Sound, the supply of salmon has dwindled tremendously. For that reason, several canneries were not opened in the season. Many of those that did operate, made comparatively small packs, thus showing conclusively that the salmon runs have dwindled into relative unimportance and each year brings anew the problem of profitable operation.

In the section southward from the latitude of Lemisurier Point to Dixon Entrance the run of humpback salmon was surprisingly large, particularly to streams of the mainland, but that fact should not be accepted as an indication of a permanent improvement of the run, for the region of abundance in 1922 may be one of scarcity in 1923. The large run in the Ketchikan district in 1922 is not likely to be repeated in 1923, nor is there any prospect that there will be a general improvement in the runs elsewhere in Southeastern Alaska. In the judgment of those best informed, the salmon runs throughout the district have suffered serious depletion.

# Stream protection.

Thirty men were employed as stream guards in Southeastern Alaska in 1922. They were stationed in the most important districts during the height of the fishing season, particular attention being given to the localities and by the persons listed below:

Chilkoot River - - - - -	Chas. A. Brouillette
Chilkat River - - - - -	Patrick Gildea
Excursion Inlet and north shore of Icy Strait - - - - -	W. H. Marrett
Tenakee Inlet, Freshwater Bay and Redoubt Lake - - - - -	John T. White
Glacier Bay and Cross Sound - - -	Earl C. Bright
Whitewater Bay to Killisnoo - - -	W. R. Bayers
South shore Icy Strait - - - - -	C. E. Tibbits
Port Frederick to Point Adolphus -	Neil C. Gallagher
Redoubt Lake and Basket Bay - - -	James M. Bell
Redfish and Whale Bays - - - - -	Peder A. Anderson
Pybus Bay to Point Gardiner and Tebenkof Bay - - - - -	John H. Mantle
Gut Bay to Cape Ommaney - - - - -	George Card
Wrangell Narrows - - - - -	Frank Spalding
Cholmondeley Sound - - - - -	William E. Lloyd
Kasaan Bay - - - - -	Charles H. Borch
Karta Bay - - - - -	Alfred Ahnstedt
Lake Bay - - - - -	William M. Taylor
Rocky and Thorne Bays - - - - -	John A. Kelley
Kah Sheets Bay and Carroll Inlet -	James E. Munson
Point Barrie and Steamer Bay - - -	Lawrence L. Hick
Salmon Bay and McHenry Inlet - - -	Milton C. James
Red Bay - - - - -	John C. Hoffer
Deweyville and Stainey Creek - - -	A. R. Thurston
Hanus Bay - - - - -	Fred Lessard
Howard Bay - - - - -	R. M. Holley
Auke Cove and Pavlof Harbor - - -	Tom Conrad
Ratz Harbor - - - - -	Lloyd G. McInroe
Eagle Creek - - - - -	Wallace R. Newcomb
Mud Bay to Lisianski Strait - - -	Robert H. Burns
Anan Creek - - - - -	Charles Nelson.

The presence of these men at the localities listed was of unquestioned benefit to the fisheries in preventing encroachments on the streams and closed areas at their mouths, thus permitting a larger escapement of salmon than otherwise would have been the case. With two

exceptions, these men were faithful to duty and the fullest commendation is here recorded in their behalf. They were selected at random and in a majority of cases without recommendation. Their knowledge of the country and general interest in the fisheries of Alaska coupled with honesty and good judgment were weighed in their favor as against any lack of education and ability to write entertaining reports.



### Fish piracy.

Early in the season when it seemed probable that the run of salmon would be light, and that the pack by several canneries would be small, several complaints were made by certain cannery superintendents that their traps were being regularly robbed and that large quantities of salmon were thus lost. Among those who reported depredations of this sort were Captain Ahues, of Libby, McNeill & Libby; Otto Burckhardt and Charles Burckhardt, of the Alaska Consolidated Canneries; Carl Sutter, of the Fidalgo Island Packing Co.; and J. T. Barron, of the Thlinket Packing Corporation. A conference with most of these cannerymen was held in the office of the United States attorney at Juneau to consider ways and means of breaking up this unlawful traffic. In the first place the estimated loss of fish seemed to be exaggerated as none of the boats alleged to be engaged in this business were capable of handling the quantities of fish said to have been stolen. Moreover, there was no market for large lots of salmon except at the larger canneries. Opinions were expressed at the conference that the salmon stolen from traps located north of Frederick Sound were sold to the Haines Packing Co., at Haines, the Juneau Cold Storage Co., at Juneau, and the Douglas Island Packing Co., at Douglas. Small lots of salmon may have been stolen and sold to these companies, but no one could produce evidence of such transactions. The only available information was a conglomeration of rumors and suspicions. No action was brought against any suspected pirates, nor was any identification of men and boats attempted by trap watchmen, who, of all others should have known best who were regarded as pirates.

At times reports were current in the Ketchikan district that traps had been robbed and that as many as 20,000 salmon were taken at one operation, but thefts of such magnitude are open to question for the reason as already intimated that a fairly large vessel would be required to transport such a quantity of salmon and several hours would also be consumed in brailing so many fish from a trap. In view of these circumstances, detection would have been easily possible unless the trap watchmen were parties to the transactions. It is my opinion that there was little truth in the reported robbery of traps, and out of this has grown a conviction that the traffic, if any exists, can be ended whenever the cannerymen are so determined. At present there is not much satisfactory evidence that they have ever tried to stop these operations, in consequence of which a belief is growing among competent observers that this so-called piracy is used as an excuse to stock holders in the packing companies for failure to make expected packs and profits. This belief is strengthened by the fact that these losses are reported principally by the representatives of companies whose financial standing is insecure.

S. E. Alaska

Violations and prosecutions.

✓ On Saturday, June 17, Stream Guard Neil C. Gallagher apprehended Jack Moore, Peter Kanosh, and Moses Smith trolling for salmon in Port Frederick during the weekly close season, each man using a power boat and fishing with more than one line. They were arraigned before the United States Commissioner at Hoonah, pleaded guilty, and each man paid a fine of \$1.00 and costs.

Sunday, June 25, during a patrol off Port Alexander and Cape Ommaney Earle L. Hunter, master of the Petrel, found Chas Olsen, P. Peterson and L. M. Hair, all of Ketchikan, and Edward Thompson and John Thompson, both of Seattle, trolling for salmon with power boats contrary to law and regulations. They were ordered to stop fishing and to go to Port Alexander where notice was served on each one informing him that he would be reported to the United States Attorney for prosecution. In due time these violations were reported to the attorney who advised that he would endeavor to have the Unalga, then at Juneau, go to Port Alexander and dispose of the cases, but the commanding officer demurred on the ground that Chatham Strait in the region of Port Alexander was unsurveyed and that he could not risk his vessel in those waters. These cases have not therefore come to trial.

On June 24, Warden O'Connor found Richard T. Marshall trolling for salmon off Point Gardiner at 6:50 p. m. with four lines from a power boat. No action was taken against him as he had but recently returned to Alaska from school in Oregon and probably had not heard that a notice was issued earlier in the season warning all fishermen that trolling for salmon, except by a line held in the hand, was unlawful.

On July 9, at 1:10 p. m., Warden O'Connor found a trap on Pleasant Island and one on Porpoise Island in Icy Strait, operated by the Thlinket Packing Corporation, with the pot tunnels open. On July 16, he found a trap at Wilson Cove, owned and operated by the Wilson Fisheries Co., with the tunnel but partly closed and the heart walls opened 44 and 23 inches, respectively, at one hour before low water. These matters were laid before the United States attorney who decided that as they were largely technical offenses it was not worth while to take them up.

On August 9, O. Benjaminson, O. Odsera, and O. E. Fasness made a set with a purse seine within 500 yards of the mouth of a salmon stream 2 miles north of Point Barrie, Kupreanof Island, where Lawrence L. Hick was stationed as stream guard. The case was reported to the commissioner at Wrangell and warrants were issued and served on Benjaminson and Odsera. They were brought to trial at Petersburg before a jury which, after due deliberation, found them guilty of a violation of the fishery regulations. They were fined \$10 each and the costs of the prosecution amounting to about \$70.00. Fasness had gone to Seattle, so the case against him is still pending.

✓ On October 16, the grand jury at Juneau indicted Chris Wick, Ole Olson, and Magnus Nygard for fishing within 500 yards of the mouth of a stream entering Redfish Bay, on the southwest coast of Baranof Island. They were arraigned October 19 and entered pleas of not guilty. On October 20, pleas were changed to guilty. Judgment and sentence was filed and entered October 21. Wick ~~was~~ fined \$50 and costs and sent to jail for 30 days at Petersburg; Olson was fined the costs of the case and sent to jail at Petersburg for 30 days; Nygard was sentenced to jail

for 20 days at Juneau.

James Peratovich was charged in a complaint filed before the commissioner at Craig with unlawful fishing within 500 yards of the mouth of Klawak Creek, and, upon conviction, was fined \$32.15, including costs of the case. At the same time and before the same court, a complaint was entered against Jim Dick charging him with setting a seine entirely across the lagoon of Klawak Creek. He was tried, convicted, and fined \$17.15, including costs.

On August 23, a complaint was filed before the commissioner at Ketchikan, charging Clyde Cowan with purse seine fishing in White River on August 22. He pleaded guilty and was fined \$10 and costs.

Warden Combs reported that a trap near Craig, operated by the Alaska Consolidated Canneries did not have the tunnel closed and the heart walls open on Sunday, July 30, in compliance with law. Owing to the resignation of Mr. Combs on August 31 and his departure from Alaska this case was not presented for trial.

A controversy arose between the Alaska Consolidated Canneries and the A. & P. Products Corporation over the location of two floating traps along the southern shore of Kanaganat Island, the disputed question being the lateral distance interval between the traps. The A. & P. Products Corporation claimed that its trap was the first one put into position and set for fishing and that later the Alaska Consolidated Canneries set a trap approximately 1100 feet westward therefrom, making it fast to a rock submerged at high tide, contrary to the regulations of the War Department. Joint investigations were made by representatives of the Bureau and the Engineers Office of the War Department at Juneau, as a

result of which the permit issued to the Alaska Consolidated Canneries was cancelled and the removal of the trap was ordered for the reason that the company had misrepresented the facts, it having stated in the application for the permit that the trap would be tied to a small island. In view of all the circumstances, the United States attorney did not think it advisable to accuse either company of a violation of the fisheries law.

On July 12, John Olson was found fishing with a set gill net covering more than one-third the width of a slough of the Stikine River. Complaint was filed before the commissioner at Wrangell and the case was tried by a jury on July 13, resulting in a disagreement. Further disposition of the case has not been made.

### Salmon canning.

Several changes were noted in the operation of salmon canneries in 1922. The Alaska Consolidated Canneries was organized and took over the Alaska Pacific Fisheries' canneries at Tee Harbor, Chomley, and Yes Bay; the Columbia Salmon Company's cannery at Tenakee; and the Rose Inlet and Boca de Quadra canneries of the Southern Alaska Canning Co. The Atlantic & Pacific Products Corporation, a new operator in Alaska, acquired possession of the site previously occupied by the plant of the Hidden Inlet Canning Co., at Hidden Inlet, and built thereon a modern salmon cannery. It also leased the Ford Arm cannery of the Deep Sea Salmon Co., and the plant at Warmchuck on Heceta Island, belonging to Swift Arthur Crosby Co. J. D. Roop & Co. operated the plant of the Standard Salmon Packers, Inc., at Tenakee. The cannery of the Sitka Packing Co., at Sitka, was leased and operated by A. P. Wolf & Co. The Sea-Coast Packing Co. carried on salmon canning at Craig in the plant formerly owned by the Columbia Salmon Co. The Steamboat Bay Packing Co. took over the cannery of the Noyes Island Packing Co., on Noyes Island.

Several canneries which were closed in 1921 were opened in 1922.

They were owned and located as follows:

Alaska Fish Co. - - - - -	Waterfall
Alaska Packers Association - - - - -	Loring and Wrangell
Auk Bay Salmon Canning Co., - - - - -	Auk Bay
F. C. Barnes - - - - -	Lake Bay
Beauclaire Packing Co. - - - - -	Port Beauclerc
Beegle Packing Co. - - - - -	Ketchikan
Burnett Inlet Packing Co. - - - - -	Burnett Inlet
Fidalgo Island Packing Co. - - - - -	Ketchikan
Hoonah Packing Co. - - - - -	Hoonah
Mt. Baker Packing Co. - - - - -	(Floating)
Northwestern Fisheries Co. - - - - -	Kasaan

Pure Food Fish Co. - - - - -	Ketchikan
Pyramid Packing Co. - - - - -	Sitka
Sanborn Cutting Co. - - - - -	Kake
Starr Collinson Packing Co. - - -	Moira Sound.

Six new canneries were operated in 1922. They were owned and located as follows:

Dobbins Packing Co., - - - - -	(Floating)
Big Harbor Packing Co. - - - - -	Craig
Ness Fish Company - - - - -	Petersburg
R. J. Peratovich - - - - -	Bayview
Red Salmon Packers Association	(Floating)
The Trading Union, Inc., - - -	Petersburg

These are all small canneries, none of which made a pack of more than a few thousand cases. In some instances, only a few hundred cases were packed. The Trading Union, Inc. purchased the plant used in 1921 by Elison & Malcolm as a crab cannery.

A total of 29 canneries were closed during the season of 1922.

They were owned and located as follows:

Admiralty Packing Co. - - - - -	Pybus Bay
Alaska Salmon & Herring Packers -	Tyee
Alaska Sanitary Packing Co. - -	Cape Fanshaw
American Packing Co. - - - - -	Juneau
✓ Astoria & Puget Sound Canning Co.	Excursion Inlet.
Baranof Packing Co. - - - - -	Red Bluff Bay
John L. Carlson & Co. - - - - -	Auk Bay
Chilkat Packing Co. - - - - -	Haines.
✓ Fidalgo Island Packing Co. - - -	Bay of Pillars
✓ Hood Bay Packing Co. - - - - -	Hood Bay
✓ Karheen Packing Co. - - - - -	Karheen
Ketchikan Packing Co. - - - - -	Ketchikan
Marathon Fishing & Packing Co. - -	Cape Fanshaw
Northern Packing Co. - - - - -	Juneau
Northwestern Fisheries Co. - - -	Dundas Bay, Hunter Bay
	Quadra, Roe Point, Santa
	Ana, and Shakan.
✓ Pacific American Fisheries - - -	Excursion Inlet.
Petersburg Packing Corporation -	Washington Bay
Point Warde Packing Co. - - - -	Point Warde
Revilla Packing Co. - - - - -	Ketchikan
Southern Alaska Canning Co. - -	Big Port Walter
E. R. Strand - - - - -	Wrangell Narrows
Todd Packing Co. - - - - -	Todd
Union Bay Fisheries Co. - - - -	Union Bay.

The Mutual Packing Co. has withdrawn from the Alaskan field.



## Active canneries.

Including the changes in ownership, and the new canneries already listed, the active canneries numbered 57. The following list shows the operating company and the location of each plant:

Alaska Consolidated Canneries, - - -	Chomley, Tenakee, Rose Inlet, Quadra, Tee Harbor, and Yes Bay.
Alaska Fish Co., - - - - -	Waterfall
Alaska Herring & Sardine Co., - - -	Port Walter
Alaska Packers Association, - - - -	Loring and Wrangell
A. & P. Products Corporation, - - -	Ford Arm, Heceta Island, and Hidden Inlet.
Alaska Sanitary Packing Co., - - - -	Wrangell
Annette Island Packing Co., - - - -	Metlakatla
Auk Bay Salmon Canning Co., - - - -	Auk Bay
Beauclaire Packing Co., - - - - -	Port Beauclerc
Beegle Packing Co., - - - - -	Ketchikan
Big Harbor Packing Co., - - - - -	Craig
Burnett Inlet Packing Co., - - - -	Burnett Inlet.
Deep Sea Salmon Co., - - - - -	Port Althorp
Dobbins Packing Co., - - - - -	(Floating)
Douglas Island Packing Co., - - - -	Douglas
F. C. Barnes Co., - - - - -	Lake Bay
Fidalgo Island Packing Co., - - - -	Ketchikan
George Inlet Packing Co., - - - - -	George Inlet
Haines Packing Co., - - - - -	Letinkof Cove
P. E. Harris & Co., - - - - -	Hawk Inlet
Hetta Packing Co., - - - - -	Coppermount
Hidden Inlet Canning Co., Inc., - -	Hood Bay
Hoonah Packing Co., - - - - -	Hoonah
G. W. Hume Co., - - - - -	Scow Bay
Libby, McNeill & Libby, - - - - -	Taku Harbor and Yakutat
Mitkof Island Packing Co., - - - -	Petersburg
Mt Baker Packing Co., - - - - -	(Floating)
Geo. T. Myers & Co., - - - - -	Chatham
Ness Fish Co., - - - - -	Petersburg
North Pacific Trading & Packing Co.,	Klawak
Northwestern Fisheries Co., - - - -	Kasaan
Red Salmon Packers Association, - -	(Floating)
Pure Food Fish Co., - - - - -	Ketchikan
Pyramid Packing Co., - - - - -	Sitka
R. J. Peratovich, - - - - -	Bayview
J. D. Reop Co., - - - - -	Tenakee
Sea-Coast Packing Co., - - - - -	Craig
Sanborn Cutting Co., - - - - -	Kake
Mountain Point Packing Co., - - - -	Wrangell Narrows

J. L. Smiley & Co., - - - - -	Ketchikan
Starr Collinson Packing Co., - -	Meira Sound
Stuart Packing Corporation, - - -	(Floating)
Steam Boat Bay Packing Co., - -	Noyes Island
Sunny Pint Packing Co., - - - -	Ketchikan
Thlinket Packing Corporation, -	Funter Bay
The Trading Union, Inc., - - -	Petersburg
Ward's Cove Packing Co., - - -	Wards Cove
A. P. Wolf & Co., - - - - -	Sitka

The Sunny Point Packing Co. built a commodious cannery at Charcoal Point on Tongass Narrows about one mile north of Ketchikan and moved thereto from the cramped quarters adjacent to the plant of the Ketchikan Cold Storage Co. in Ketchikan. The new cannery is regarded as a model salmon packing establishment.

# Mildcuring and pickling.

There were approximately 25 operators in the mildcure industry in southeastern Alaska in 1922, of whom the following were the most important:

Alaska Union Fisheries, Inc., - - - - -	Port Alexander
J. S. Killeen, - - - - -	(Floating)
Atlantic & Pacific Packing Co., - - - - -	Ketchikan
Karl Hansen, - - - - -	(Floating)
Big Harbor Packing Co., - - - - -	Craig
P. A. Haugen, - - - - -	(Floating)
Booth Fisheries Co., - - - - -	Sitka
M. B. Dahl, - - - - -	(Floating)
Cape Flattery Fisheries Co., - - - - -	(Floating)
Chas. W. Johnson, - - - - -	(Floating)
Starfold, Wold & Hansen, - - - - -	(Floating)
The Hardcastle Fish Co., - - - - -	Ketchikan
Coulter & Tozier, - - - - -	(Floating)
H. R. Thompson, - - - - -	Ketchikan
New England Fish Co., - - - - -	Ketchikan
Libby, McNeill & Libby, - - - - -	Taku Harbor
D. Balcken, - - - - -	Dry Bay
W. F. Reichwein, - - - - -	Douglas
Hansen & Lystad, - - - - -	Wrangell
Juneau Cold Storage Co., - - - - -	Juneau
George Ramstad, - - - - -	Cape Fanshaw
Louis Retzloff, - - - - -	Bay of Pillars
A. H. Sonsthagen - - - - -	(Floating)
Steamboat Bay Packing Co., - - - - -	Noyes Island

This industry depends largely on trollers for its supply of salmon, kings and cohos being the species chiefly used. The important fishing grounds are located along the east and west shores of Baranof Island, the south shore of Admiralty Island, and the northwest shore of Prince of Wales Island. Trolling is also carried on in the vicinity of Noyes Island and the south end of Prince of Wales Island. The salmon mildcured at Wrangell and at Taku Harbor are obtained from adjacent waters by gill netters.

The fishing season of the trollers begins early in April and continues until late in October, but the length of the season is governed

largely by weather conditions.

Practically no pickling or hard salting of salmon is done in southeastern Alaska. A few barrels were packed in 1922, not as a commercial enterprise, but more for local or domestic use.

Fresh and frozen salmon industry.

Shipment of fresh salmon in ice were made from Juneau, Petersburg, Wrangell and Ketchikan to Seattle. The important dealers were as follows:

H. Bergman, - - - - -	Ketchikan
The Hardcastle Fish Co., - - - - -	"
New England Fish Co., - - - - -	"
H. R. Thompson, - - - - -	"
Alaska Union Fisheries, Inc., - - -	Port Alexander
P. A. Haugen, - - - - -	Ketchikan
Karl Hansen, - - - - -	Port Alexander
E. M. Basse, - - - - -	Wrangell
Doremus Fisheries, - - - - -	Juneau, Petersburg, and Ketchikan.
Ripley Fish Co., - - - - -	Ketchikan.
Sebastian-Stuart Fish Co., - - -	Juneau, Petersburg, and Ketchikan.
Juneau Cold Storage Co., - - - -	Juneau
Olson Fish & Cold Storage Co.,	Petersburg, Wrangell, and Ketchikan.

Salmon in considerable quantities were delivered direct from the fishing grounds to Prince Rupert, or to boats from that port or adjacent canneries in British Columbia. The number of salmon thus exported can not be ascertained from customs house records as several boats were alleged or presumed to have plied regularly between the Alaskan fishing grounds and Canadian points without regard to customs regulations. This traffic was probably larger than ever before owing to the average better price paid for salmon on the British side as compared with American prices.

The freezing of salmon was limited to the operations of four large concerns, as follows:

Booth Fisheries Co., - - - - -	Sitka
New England Fish Co., - - - - -	Ketchikan
Libby, McNeill & Libby, - - - -	Taku Harbor
Ketchikan Cold Storage Co., - - -	Ketchikan

The last named company was not directly engaged in fish freezing on its own account, but was merely operating a freezing plant on a customs basis for the business of those who wanted or cared to avail themselves of its facilities.

### Salmon by-products.

This industry was limited to the operations of the Petersburg By-Products Co., at Scow Bay, and the Alaska Reduction Co., at Hawk Inlet. Both companies utilized the offal and waste fish at nearby canneries in the manufacture of fish meal and oil.

There would seem to be a promising field for similar activities in the Ketchikan district where 8 canneries are located within easy reach of a centrally located plant. The Fish Cannery By-Products Co., at Ward Cove, built some years ago a large reduction plant for the manufacture of oil and fertilizer from cannery offal, but for unknown reasons it was not operated successfully although there was an ample supply of material.

## Salmon waste.

The most regrettable occurrence of the season was the large waste of humpback salmon in the Ketchikan district, the loss being estimated at from 200,000 to 5,000,000 fish. It was due almost entirely to the operations of independent purse seiners and trap owners who made large catches of salmon without having a definite market for their fish. During the heavy run, the canneries were amply supplied with salmon taken by their own traps and seines, and it was not possible for them to utilize the catches made by independents. In one or two instances the canneries were at fault, but in the majority of cases the losses fell on the fishermen who had no market for their catches.

To what extent this waste was wanton is not yet known. An investigation of the causes has been made under direction of the United States attorney at Juneau, who will submit such evidence as has been secured to the grand jury which convenes at Ketchikan in the spring of 1923.



## Herring industry.

This industry shows further expansion of business in 1922 as compared with that of 1921, not only in the number of operators but in the volume of products. Practically all pickled herring were Scotch cured, the pack was of better quality, and sale were better and more promptly made than in past seasons. This was doubtless due to more care in packing and selection. There is still much room for improvement along this line, and the market will be better as the products meet the requirements of the trade.

Fifteen herring operators of importance were engaged in this industry in southeastern Alaska in 1922. The name and place of business appears in the following list:

Chatham Strait Fis Co., - - - - -	Port Walter
Alaska Herring & Sardine Co., - - - - -	Port Walter
New England Fish Co., - - - - -	Ketchikan
Deep Sea Salmon Co., - - - - -	Port Althorp
M. E. Driese, - - - - -	Hood Bay
Jacob Johnson, - - - - -	Ships Cove
Arentsen & Co., - - - - - Warm Springs Bay	and Big Port Walter
Baranof Packing Co., - - - - -	Red Bluff Bay
Hans Anderson, - - - - -	Petersburg.
John Einmo, - - - - -	Tyee
The Ellson Co., - - - - -	Auk Bay
J. S. Killeen, - - - - -	Port Conclusion
Ramstad & Ross, - - - - -	" "
Booth Fisheries Co., - - - - -	Sitka

Of these, the Alaska Herring & Sardine Co., Chatham Strait Fish Co., Arentsen & Co., Baranof Packing Co., and the Ellson Co., in addition to Scotch curing, manufactured fish oil and fertilizer from herring. The New England Fish Co., and Booth Fisheries Co., handled herring for bait exclusively. The Ellson Co. used the cannery of John L. Carlson & Co. at Auk Bay, but it went bankrupt about the middle of the summer and the settlement of its affairs was taken over by the First National Bank of Juneau.

### Shrimps and crabs.

Three companies, located at Petersburg, represent the shrimp industry of southeastern Alaska. They were the Ness Fish Co., Alaskan Glacier Sea Food Co., and Olympic Fisheries Co.

The product consists of shrimp meat which is prepared by scalding the shrimps in the shell just as they are delivered from the fisheries. The shells are removed by hand and the meat packed in 5-pound cans which are then shipped in cold storage to Seattle. The work of removing shells is performed by Japanese and native laborers.

The important shrimp grounds are found at the head of Frederick Sound in approximately 20 fathoms of water, where the best and largest shrimps are taken. Later in the season, when operations in the Sound are interrupted by stormy weather, the supply of shrimps is obtained in Duncan Canal. They are reported as being plentiful in this latter region but in size are unequal to those of Frederick Sound. As Duncan Canal is a body of protected water, fishing can be prosecuted almost without interruption during the winter months.

Two exclusively crab canneries were operated in southeastern Alaska in 1922, one of which was located at Sitka and was owned by the Oregon-Alaska Packing Co. This plant was established in 1921, primarily to utilize the large spider crab, sometimes called "Japanese crab", which was said to be abundant in that locality. The company was unable to develop crab grounds of importance, and in consequence its operations for the season were disappointing. If this company continues in business another year, it is likely that the plant will be moved to a district where dungeness crabs can be obtained in satisfactory quantities.

The other company represented in the crab industry was the Dobbins Packing co. which operated a floating cannery at Petersburg, having moved from Wrangell to be nearer better grounds. This company prides itself on the excellence of its products, and on the fact that only whites are employed in the cannery. The work of picking the meat from the shells and packing it into cans is done entirely by white women.

At the Sitka cannery, the meat in the body of the shells is blown out by machinery.

## Whaling.

The United States Whaling Company is the only concern in southeastern Alaska represented in this industry. Its plant is located at Port Armstrong and its hunting ground is in the Pacific Ocean from 25 to 50 miles off shore. The company enjoyed a fairly successful season in 1922.

## Patrol vessels.

A fleet of five Bureau owned boats was employed in patrolling the fishing grounds of southeastern Alaska in 1922. In addition, 18 smaller boats were chartered for periods ranging from 10 to 75 days, covering the season from the latter part of June to the middle of September, and rendered valuable assistance in this important work.

During the calendar year, the cruises of Bureau boats aggregated 24,574 miles, which is credited to the different vessels as follows:

Auklet - - - - -	6,300 miles	
Murre - - - - -	7,708	"
Petrel - - - - -	5,478	"
Puffin - - - - -	1,500	" (Estimated)
Widgeon - - - - -	3,588	"

The Petrel was in commission four months and the Puffin  $3\frac{1}{2}$  months. The Widgeon reached Alaska late in August and it was in commission the remainder of the year. The Auklet and Murre were in continuous commission except during the time required to install, in each, new 40 H.P. engines and to make other necessary alterations and repairs of the superstructure of each boat. These improvements have made the Auklet and Murre better boats for our service and they are now able to make headway against wind and sea which heretofore would have sent them to shelter.

The Petrel was redecked and remodeled generally. The Duesenberg engine was taken out and replaced by the 25 H. P. Standard engine from the Auklet. The engine was not in the best of condition but it gave fair service during the season and drove the boat at an average speed of  $6\frac{1}{2}$  miles per hour. This vessel is a valuable addition to the fleet and if given more power it will be of even greater usefulness.

The Puffin was used chiefly in the protected waters of the west coast of Prince of Wales Island. It is too small for general patrol work and ought not to be assigned to such service. Its further use in extended cruising is therefore a matter of doubt. It may be used advantageously in protected waters provided a capable engineer can be found, one who can operate a high speed motor without wrecking it. The Puffin's engine has had hard usage by inexperienced self-styled engineers and it will soon be necessary to give it a complete overhauling.

The Metganser was transferred to Chignik in March after being equipped with a new 16 H. P. Standard engine. This boat performed no service in southeastern Alaska as the engine was not in good order and the cost of putting it in condition could not be met in 1921.

### Stream marking.

Considerable new work in marking the mouths of streams was done during the summer, particularly along the west coast of Baranof Island from Sitka to Cape Ommaney, and through Peril Strait. Practically all of these streams are unnamed. At many other creeks, new markers were placed on the 500 yard line and the old markers at the 200 yard line were removed. This change was due to the closing order of December 30, 1921 which prohibits fishing within 500 yards of the mouth of all salmon streams.

The signs were improved by using larger notices and more substantial posts.

Much work in the marking of streams remains to be done and in some cases difficulty will be encountered in determining the proper place to erect the markers. In these, it is my idea that careful surveys should be made and the localities mapped and permanent monuments established, similar to those used by the Forest Service and the General Land Office, as aids in identifying the spot should the sign posts be removed or destroyed.

It also seems to me that time can be profitably employed in surveying and mapping all salmon streams in order that some knowledge may be gained and recorded in graphic form of the areas suitable for spawning beds.

## Fishcultural activities.

The Federal salmon hatchery at McDonald Lake, the Fortmann hatchery of the Alaska Packers Association near Loring, and the Quadra hatchery of the Northwestern Fisheries Co. were operated in 1922. In addition to these, the Alaska Territorial Fish Commission continued salmon hatching at Juneau and also established a field station at Auk Lake where approximately 1,000,000 red-salmon eggs were collected. Field work was also inaugurated at Anan Creek and a collection of 1,000,000 humpback-salmon eggs was made and transferred to Juneau for hatching and liberation of resulting fry in adjacent waters.

The Commission has under advis<sup>e</sup>ment the construction of a permanent hatchery at Auk Lake if the legislature which convenes in March, 1923, will make the necessary appropriation. At the same time, it is hoped to secure an appropriation for a hatchery at Ketchikan, primarily for the propagation of humpback salmon.



## Miscellaneous activities.

The work of the Bureau force in southeastern Alaska in 1922 was varied to the extent that it included, in addition to strictly fishery duties, the authentication of 525 fur-seal skins taken by natives in the vicinity of Sitka, a patrol of those waters during the seal migration, and investigation of the operations of the Washington Fish Commission at Anan Creek, an examination of salmon streams for the purpose of determining the effect of the development of hydro-electric power upon the runs of salmon to those waters, and an inquiry into the practice of using salmon for fox food. These matters were presented in special reports and need not now be considered in detail.

The Bureau also cooperated with the Engineer Office of the War Department in the inspection of fish traps, both active and abandoned. The purpose of this inspection was to bring about a better observance of the regulations of that department for the protection of vessels by causing the removal or proper lighting of fish traps so located as to constitute a menace to navigation during the winter months.